

REMARKS

Claims 1-20 are currently pending. In the December 18, 2006 Office Action, the Examiner rejected claims 11-18 under 35 U.S.C. § 101 as being directed to non-statutory subject matter, but indicated that the rejection could be overcome by including a “computer readable medium encoded with a computer program” limitation in the claims. In addition, claims 1, 2, 4-6, 8, 10, 11, and 13-18 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,473,607 to Shohara et al. (“Shohara”); claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Shohara in view of U.S. Patent Publication No. 2003/0028677 to Fukuhara (“Fukuhara”); claims 7, 12 and 19-20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shohara in view of U.S. Patent No. 6,622,251 to Lindskog et al. (“Lindskog”); and claims 9 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shohara in view of U.S. Patent Publication No. 2002/0059434 to Karaoguz et al. (“Karaoguz”). Applicants respectfully traverse the rejections for the reasons set forth hereinbelow.

A. Claims 11-18 Recited Statutory Subject Matter

In response to the Examiner’s rejection of claims 11-18 under 35 U.S.C. § 101, Applicants note with appreciation the Examiner’s suggestion on how to overcome the rejection, and hereby reserve the right to amend the claims as suggested. However, Applicants respectfully submit that no amendment is required since the existing claim language effectively recites a data structure embodied in computer readable media. In particular, claim 11 recites an article of manufacture having “recordable medium having stored thereon executable instructions and data” which would be understood by those skilled in the art to refer to statutory subject matter. Accordingly, Applicants respectfully request that the statutory subject matter rejection of claims 11-18 under 35 U.S.C. § 101 be withdrawn and that the claims be allowed.

B. Claims 1, 2, 4-6, 8, 10, 11, and 13-18 Are Not Anticipated by Shohara

In response to the Examiner’s rejection of claims 1, 2, 4-6, 8, 10, 11, and 13-18 as being anticipated by Shohara, Applicants respectfully request reconsideration and withdrawal of the rejection because Shohara’s disclosure -- of using an “event scheduler” to control reception of “scheduled intermittent messages” with a dual mode timer that uses different clock signals to power down all idle components during a scheduled power save sleep mode -- does not

anticipate the present invention's scheme using detected sleep instructions and wakeup signals to selectively power down processing modules in a pipeline circuit only to the extent required by the wake-up signal. *See, e.g.*, Application, pages 3-4 (paragraphs 8-9) and page 11 (paragraph 30). This scheme is variously recited in the claims with reference to detecting a "sleep instruction" which is used to place the processing unit, instruction pipeline circuit and at least one processing module in a low-power state, and then reactivating the instruction pipeline circuit to the extent required by a received "wake-up signal." *See, e.g.*, claims 1 and 11.

Applicants respectfully submit that the claim rejections completely ignore the specific language of the claims that recite selective reactivation of the instruction pipeline and one or more of the processing modules to the extent required by the received wake-up signal. For example, the rejection of each of the independent claims 1 and 11 states that the "instruction pipeline circuit" feature is found in Shohara at column 5, lines 21-32. *See, Office Action*, pp. 3-4 (December 18, 2006). However, a careful reading of the cited passage confirms that Shohara nowhere discloses an "instruction pipeline circuit," much less an instruction pipeline circuit which is selectively powered down and up in response to sleep instructions and wake-up signals. Indeed, the word "pipeline" never appears in Shohara. While it is not entirely clear, perhaps the Examiner is inferring the pipeline requirement from the reference to an "event scheduler," but this inference ignores Shohara's express teaching that the "event scheduler" is simply a register for storing command words and a "scheduled system time for execution of said command" such that

... the event scheduler continually monitoring system time for a match with the scheduled time in any of the records, said match causing execution of the command in the record for which the match occurs....

Shohara Patent, col. 6, lines 59-67. Thus, Shohara uses fixed predetermined time intervals to dictate when their device wakes up. In contrast, Applicants have disclosed and claimed a flexible power control system and methodology which allows the communication processor to go to sleep at arbitrary times (via the sleep instruction) and to be awakened by external events which can occur at any time. Because Shohara does not disclose selectively reactivating instruction pipeline circuit modules in response to sleep instructions and wakeup signals, Shohara cannot be used as an anticipatory reference against the claims. *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) ("A claim is anticipated

only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.”). Accordingly, Applicants respectfully request that the anticipation rejection of claims 1, 2, 4-6, 8, 10, 11, and 13-18 be withdrawn and that the claims be allowed.

C. Claims 3, 7, 9, 12, 15 and 19-20 Are Not Obvious

In response to the Examiner’s various obviousness rejections of claims 3, 7, 9, 12, 15 and 19-20, Applicants respectfully request reconsideration and withdrawal of these rejections because the Examiner has not established a *prima facie* case of obviousness by showing that all the claim limitations are taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974); In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

As a preliminary matter, the various cited combinations of references do not disclose or suggest Applicants’ claimed invention for controlling power in a communications processor by responding to “sleep instructions” and “wake-up signals” to selectively reactivate only the processor modules in the instruction pipeline circuit that are required to respond to the detected wake-up signal. The failure of Shohara to meet this requirement (as explained above) is not remedied by any of the cited Fukuhara, Lindskog or Karaoguz references. In particular, Shohara’s failure to disclose an “instruction pipeline circuit” is not remedied by the Fukuhara, Lindskog or Karaoguz references, none of which refer to a “pipeline circuit.” Nor do the cited references, alone or in combination, disclose or suggest a communication processor which goes to sleep at arbitrary times (via the sleep instruction) and which can be awakened by external events (via wake-up signals) which can occur at any time. Nor do the cited references disclose that the individual modules in the instruction pipeline circuit can be reactivated only to the extent required by the wake-up instruction. Indeed, the Shohara disclosure seems to directly contradict the idea of selective power-up. *See*, Shohara Patent, col. 12, lines 32-56. On this point, Shohara is quite clear that the Shohara controller “powers down all idle components of the device between message receptions in a power saving sleep mode to conserve battery power. During active mode when the device is fully active in reception of messages the timer uses a reference oscillator with a relatively high frequency to support digital processing by the receiver.” Shohara Patent, col. 10, lines 39-44. When, as here, the Shohara reference teaches away from the claimed invention, a *prima facie* case of obviousness has been rebutted. *See*, MPEP §

2144.05(III) (“A *prima facie* case of obviousness may also be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997)....”).

Having shown that the cited references, individually or in combination, fail to disclose or suggest Applicants’ claimed staged wakeup scheme, Applicants submit that a *prima facie* case of obviousness has not been established, and therefore need not address the deficiencies in the Examiner’s proposed “motivation to combine” evidence. *Alza Corp. v. Mylan Labs., Inc.*, No. 06-1019 (Fed. Cir. Sept. 6, 2006) (The motivation-to-combine inquiry “prevent[s] statutorily proscribed hindsight reasoning when determining the obviousness of an invention.”). Nor will Applicants elaborate upon the erroneous rejections of claims 9 and 15, other than to note that both of the Shohara and Karaoguz references used to reject these claims were commonly owned by the assignee of the present invention, namely Broadcom Corporation. Accordingly, Applicants respectfully request that the obviousness rejection of claims 3, 7, 9, 12, 15 and 19-20 be withdrawn and that the claims be allowed.

CONCLUSION

In view of the remarks set forth herein, Applicants respectfully submit that all pending claims are in condition for allowance and request that a Notice of Allowance be issued. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is requested to telephone the undersigned at 512-338-9100.

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Respectfully submitted,

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